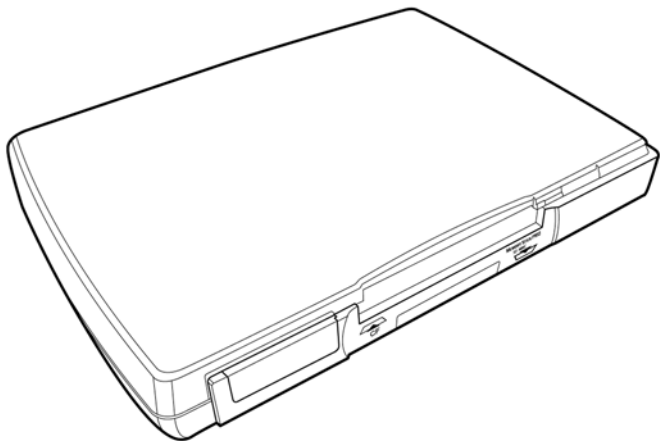


MPEG4 VIDEO RECORDER



User Manual

Preface

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Safety Information

Please read the following safety instructions, and keep the user manual for later reference.

- Use only the power adapter supplied with the product.
- Do not place the product near any source of heat or expose it to direct sunlight.
- Do not attempt to connect any computer accessory or electronic product without instruction from qualified service personnel. It may result in risk of electric shock.
- Do not expose the product to moisture. Never spill any liquids on the product.
- Do not place the product in regions with extreme temperatures.

Routine care

Wipe the product with a soft cloth. Do not use abrasive powders or solvents, such as benzene or thinner. When you leave the product unused for a long time, unplug the AC adapter from the outlet.

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1. Overview

Congratulations on purchasing the MPEG-4 Personal Video Recorder. Now you can enjoy quality multimedia anywhere you go and record your favorite video programs from a variety of video sources. The MPEG-4 recorder also plays back your favorite audio tracks, displays image files, and provides rich video clips for your Sony PSP with its recording format support.

Refer to this user manual for detailed descriptions about the product and instructions for using it.

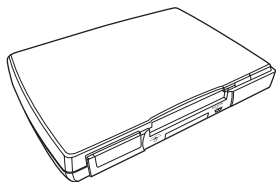
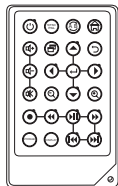
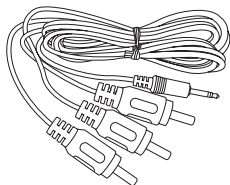
Features

The MPEG-4 recorder allows you to:

- display images (jpg, gif, and bmp formats)
- play audio files (mp3 and wma formats)
- play videos (ASF, AVI, MP4 formats)
- record video from a TV, DVD, VCR or camcorder

A Compact Flash Card or a Memory Stick Duo Card may be installed in the recorder for storage.

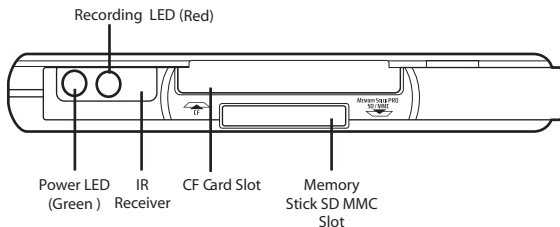
Package contents

MPEG-4 recorder**Power Adapter****Remote Control****Component cables (x2)****User Manual**

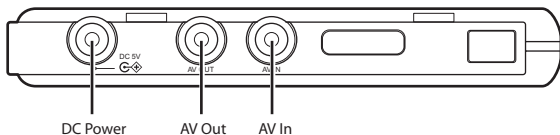
About the MPEG-4 recorder

Refer to the following sections for information about the hardware components of the recorder.













Front view

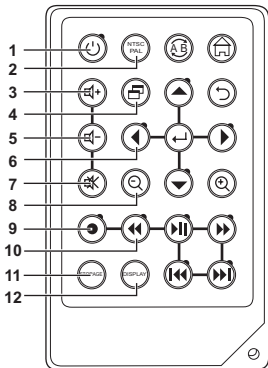


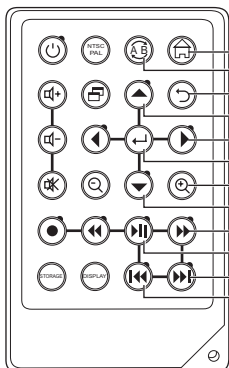
Rear view















About the remote control

Icon	Description
1. 	Turns on the power
2. 	Switches between NTSC and PAL system
3. 	Increases the volume
4. 	Enters the setting menu
5. 	Decreases the volume
6. 	Scrolls left
7. 	Mutes all sound
8. 	Zooms out
9. 	Start to record and stop recording
10. 	Rewinds playback of video and audio files
11. 	Switches between CF card and Memory Stick Duo.
12. 	Turn on and off the on screen display





Icon	Description
13. 	Returns to the top menu
14. 	Repeats playback of selected audio/video file.
15. 	Returns to the previous menu
16. 	Scrolls up
17. 	Scrolls right
18. 	Confirms selection of menu item
19. 	Zooms in
20. 	Scrolls down
21. 	Fast Forwards playback of video and audio files
22. 	Plays or pauses playback of photo, video and audio
23. 	Plays the next photo, video and audio files
24. 	Plays the previous photo, video and audio files

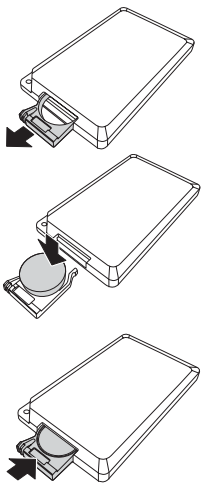
2. Getting started

This chapter describes the preliminary steps required to set up the recorder and how to make connections before starting to use the device.

Installing the remote control battery

Follow these instructions to insert the remote control battery:

1. Push in the clip at the side of the battery holder.
2. Pull battery holder out.
3. Insert the battery as shown, while noting the correct polarity.
4. Push battery holder and snap it in place.

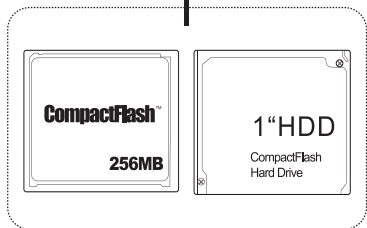
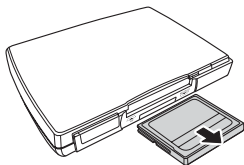
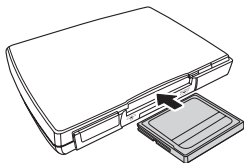


Inserting the memory Card

Notes:

Push the CF card or Hitachi 1" Micro Drive into the CF card slot until it is firmly in place.

To remove the card, grip the CF card and pull gently.



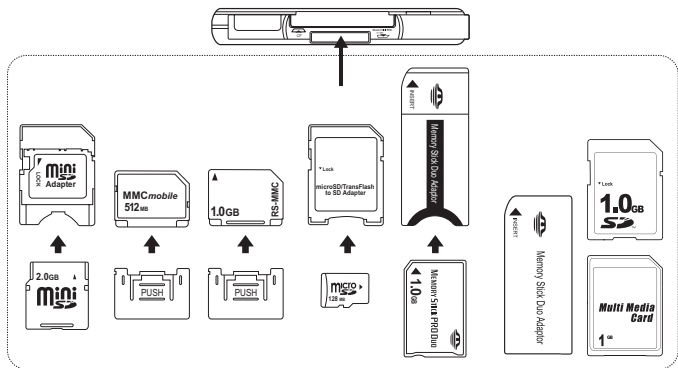
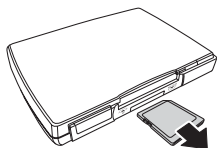
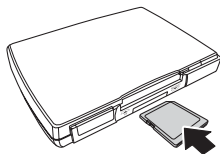
▼ Notes:

To utilize the Hitachi 1" Micro Drive with recorder, we suggest the 1" Micro Drive shall be formatted by recorder first. (See Page 26) This is to make sure the 1" Micro Drive has been formatted in FAT16 method and can be recognized by recorder for further application.

Inserting the MS, MMC,SD series memory card.

Push the card into the card slot until it is firmly in place. Ensure the front side of card is face down.

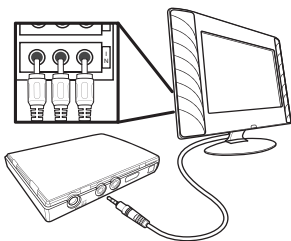
To remove the card, grip the card and pull gently.



Connecting to a TV (viewing only)

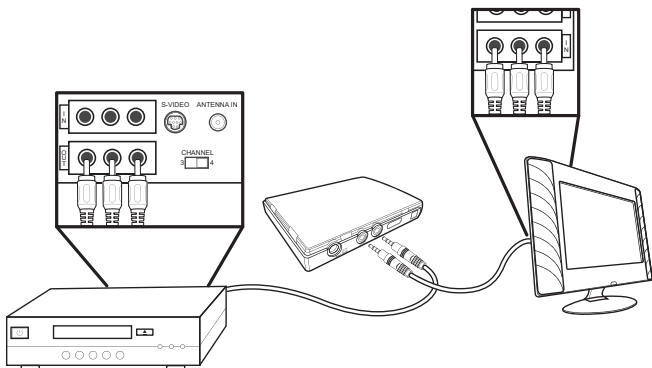
Notes:

Connect the A/V connectors (red, white, and yellow) of the A/V cable, to the corresponding input connectors on the TV. Connect the other end to the AV Out socket at the back of the recorder.



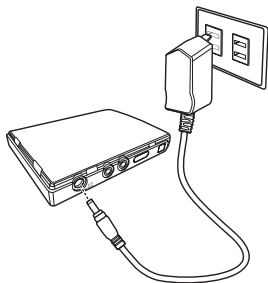
Connecting to a TV, DVD player, VCR or camcorder (recording)

Connect the A/V connectors (red, white, and yellow) of the A/V cable to the corresponding output connectors on the TV set, DVD player, VCR, or camcorder. Connect the other end to the AV In socket at the back of the recorder. Connect the second A/V cable to the AV Out socket as described in the previous section.




Connecting power


Connect the power adaptor to the DC-in socket on the rear panel of the recorder. Plug the other end of the adaptor into a power outlet.



Turning the MPEG-4 recorder on

Once the recorder is plugged in, the green power LED turns on.

Press the  button on the remote and the system turns on.

Press the  button again to turn off the recorder.

3. Using the MPEG-4 Recorder

Now that you have set up the recorder, you are ready to start using it to view your favorite images, listen to audio tracks, watch videos, and record videos. This chapter provides detailed instructions for these tasks and for using the OSD (On Screen Display) menu.

Viewing pictures



The recorder is able to display .JPG, .GIF and .BMP image file formats.

Displaying images

To display still images:

1. Highlight the Photo menu using the ◀ ▶ keys
2. Press ↵ to access the file list.
3. Use the ▼ ▲ keys to highlight the required file and press ▶|| to play the file.

Photo menu



To access the Photo Menu press . The following three functions are available:

SLIDESHOW

To set up a photo slide show, follow the procedure below:

1. Press the button to access the photo menu.
2. Use the keys to decide if **ALL** photos, the **FOLDER** or **OFF** will be used in the slide show.
3. Use the key to return to the menu.
4. Using the keys, select a photo for the slide show by pressing the button on the remote control. The screen icon will change from to].
5. Press to play the slide show.

Note: If **All** is selected for the slide show then all pictures will appear in the show. If **Folder** is selected then only those images in the current folder are displayed. When turned **Off**, only the current image is displayed.

6. Whilst playing you can use and to zoom out and in of the picture.

7. Pressing **DISPLAY** will show the following: File information, Background Volume, Current Date and Time, and the zoom amount.

BACKGROUND MUSIC

1. Use the ◀ ▶ keys to turn **ON** or **OFF** the background music function.
2. While the background music is turned on, the music will be played in the slide show.

DELETE FILES

To delete a file:

1. Highlight a photo from the main menu, go to the music menu and in delete press ↵.
2. You will be asked to confirm **YES** or **NO** and press ↵ to confirm your selection.
3. If multiple files are selected, they can be deleted at once.

Listening to music










The recorder is able to play both .WMA and .MP3 audio file formats.

Playing audio

To play an audio file:


1. Highlight the Audio menu and press \leftarrow to access the file list.
2. Use the \blacktriangledown \blacktriangle keys to go to the required file and press \blacktriangleright to play the file.

Whilst playing audio you can use the following functions:

	Decrease volume		Fast forward
	Increase volume		Rewind
	Mute volume		Play previous audio track
			Play the next audio track

Music menu



To access the Music menu press . The following two functions are available:



Repeat

Use   to choose **Off**, **Single**, **Folder** or **All**

Note: Select **Off** to turn the repeat function off, **All** repeats all tracks, **Single** will repeat only a single track, and **Folder** will repeat all tracks in the folder.

DELETE

To delete a music file:

1. Highlight a music track from the main menu, go to the music menu and in delete press .
2. You will be asked to confirm **YES** or **NO** press  to confirm your selection.

Watching videos



The recorder is able to play .ASF, .AVI and .MP4 image file formats.

Playing videos

1. Highlight the Video menu and press \leftarrow to access the file list.
2. Use the \blacktriangledown \blacktriangle to go to the required file and press \blacktriangleright to play the file.

Whilst playing the video, you can use the following functions:

	Decrease volume		Fast forward
	Increase volume		Rewind
	Mute volume		Play previous video clip
			Play next video clip

Access the specific folder for playing the recorder video clips. please refer to the specification sheet page 38,39

Video menu



To access the Video Menu, press . The following two functions are available:

Repeat

Use to choose between **Off**, **Single**, **Folder** or **All**.

Note: Select **Off** to turn the repeat function off, **Single** to repeat just the current selection, **Folder** to repeat all in the folder, or **All** to repeat all videos.

DELETE FILES

To delete a video file:

1. Highlight a video clip from the main menu, go to the video menu and in delete press .
2. You will be asked to confirm **YES** or **NO** press to confirm your selection.

Recording video

Simple record

To start a recording:

1. Highlight the record function on the main menu and press \leftarrow .
2. Change the channel on the input device i.e. TV, DVD, VCR or Camcorder.
3. Press the \bullet key to record.
4. To finish recording press the \bullet or \rightarrow key again.
5. Press the Home key to return to the main menu.
6. To view the recorded item see "Playing videos" on page 18.

Recorder menu



Resolution

To select a resolution:

1. Highlight the record section and press Menu to access the **Recorder Menu**.
2. Use the \leftarrow \rightarrow to choose among 320x240-30fps, 368x208, and 640x480.

Notice

Resolution (368 x 208) is designed for recording 16:9 video contents, which makes it easier to record and playback 16:9 movies. If you find the upper and bottom screen of the video clip is incomplete, please check if the video content is 16:9 and below steps has been followed.

1. Ensure the video content is 16:9
2. If DVD player is used, ensure the video output is set as 16:9.
3. Set the record resolution of MPEG-4 recorder as 368 x 208.

If the video contents are 4:3 (such contents are TV programs and VCD), strongly suggest to use 320 x 240-15fps resolution for the recording. If preferring to watch full screen playback on Sony PSP, please set the playback mode as the full screen playback. For more details, please refer to the user manual of Sony PSP.

Quality

To choose the quality of the recording highlight, the quality menu and use the ◀ ▶ keys to choose either Normal or Economic in 320 x 240-15fps and 368X208 option. Use the ◀ ▶ keys to choose Super Fine, Fine, Normal or Economic in 640 x 480 option.

Quick setup

Use the ◀ ▶ keys to choose between OFF, 1hr, 2hrs or 3hrs recording.

Timer record



To access the timer record function, scroll down and press the \leftarrow key.

The screen is divided into functional areas:

PROGRAMS

The recorder has 6 available recording programs. Use the following settings to setup each program.

Use the \leftarrow \rightarrow key to scroll between the programs and use the \leftarrow key to select the program.

START AND STOP TIMES

1. Use the \leftarrow \rightarrow key to move between the date and the time.
2. Press \leftarrow to highlight each section and then use the ∇ \blacktriangle keys to choose the appropriate number.
3. Press \leftarrow to complete.

FREQUENCY

The frequency function allows you to choose when this recording is activated.

1. Use the ▼ ▲ keys to choose between **OFF**, **Once**, **Daily** or **Weekly**.
2. Press ↵ to save.

Auto record

Use the ◀ ▶ keys to turn **ON** or **OFF**. If the auto record turns on, it will automatically start to record when there is a video source input and the recording will stop if the source is turned off. Or you can press ↵ key to stop the recording anytime.

Storage

Use the ◀ ▶ keys to choose between Compact Flash or MS SD,MMC memory cards.

Selecting the right recording resolution setting

The 320x240,176x120 and the 640x480 modes record in a 4:3 aspect ratio (which is standard screen format found on regular DVD's and most TV's). The 320 x 240-30fps mode is the resolution typical of most handhelds, and the files are fairly compact and will play back on the greatest number of devices.

































The 640x480 mode provides the highest resolution but also requires the most data storage space. It is generally only recommended when you plan to play back the recorded files on a TV or laptop. The extra resolution is wasted on small screens like those on handhelds. While some handhelds can handle the higher resolution 640x480 files (the Neuros 442 for one), many (like the PSP and the iPod Video) don't have the capability to play them at all.

The 368x208 resolution setting is used when recording from video sources that are in the wide-screen (16:9) format, and some people like to use it when recording for playback on wide-screen handhelds like the Sony PSP (see "Playing back recorded files"). This format uses about the same amount of data as the 320x240-15fps format. Note: If you record in the 368x208 format from a source that isn't 16:9, the upper or lower portions of the video may be clipped on playback. If recording from a TV, make sure it's in the wide-screen format. If from a DVD player, make sure the DVD is wide-screen format and also that the player's video output is set to 16:9.

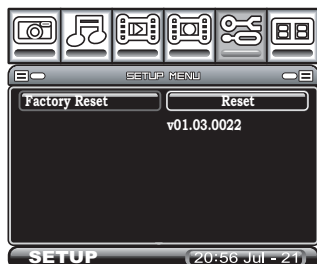
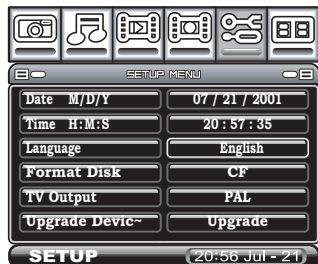
320 x 240-15fps is designed for PDAs and some Smartphones. Please refer to your playback device's manual for details concerning supported formats and resolutions.

176x120, 320x240-3GP and 176x120-3GP are designed for Mobile Phones. Please refer to your Mobile Phones's manual for details concerning supported formats and resolutions.

Note:As of the date of this printing, the PSP would not allow zooming on 368x208 resolution files. It is hopeful that Sony will correct this shortcoming in future firmware revisions.

Suggested Recording Resolutions					
	Economic	Normal	Fine	Super fine	Legend
640X480					 TV
320X240 30fps					 PSP
368X208			---	---	 iPod
320X240 15fps					 PDA
176X120					 S/Phone
320X240 3GP					 Mobile
176X144 3GP					
Please see the manual of your playback device for details.					

Setup menu



Use the \leftarrow key to access the menu.

DATE AND TIME

To change the date and time:

1. Press \leftarrow to highlight a selection yellow.
2. Use the \blacktriangledown \blacktriangle keys to change the value.
3. Use the \blacktriangleleft \blacktriangleright keys to move between fields.
4. Press \leftarrow when complete.

LANGUAGE

The default language of the recorder is English. If you would like to change it to the other available languages, follow these instructions:

1. Go to the **setup** menu and press \leftarrow .
2. Using the down arrow \blacktriangledown go to the language bar.
3. Use the \blacktriangleleft \blacktriangleright arrows to select the required language.
4. Press Home to return to main menu.

FORMAT DISK

To format the Compact Flash memory card:

1. To format the memory card, scroll down to the Format disk section and Press \leftarrow .
2. Select **YES** to confirm formatting or **NO** to cancel.

TV OUTPUT

To select the TV output:

1. Use the \blacktriangleleft \blacktriangleright keys to choose between NTSC or PAL.
2. The $\begin{matrix} \text{NTSC} \\ \text{PAL} \end{matrix}$ button on the remote control will provide the same function.

UPGRADE DEVICE FIRMWARE

To upgrade firmware:

1. Get firmware upgrades from the website.
2. Copy the latest version of firmware onto either a compact flash card or a MS Duo card.
3. Insert the card into the recorder and press \leftarrow .

FACTORY RESET

To restore all settings to the factory default:

1. To restore factory settings, scroll down to the Factory Reset function section and press \leftarrow .
2. Select **YES** to confirm reset or **NO** to cancel.

File browsing



The file browser allows you to view the contents of both the Compact Flash card and the MS Duo card at the same time.

By pressing \leftarrow you can select a file.

Data management menu



To access the Data Management Menu press \leftarrow . The following two functions are available:

COPY

The files can be copied from CF card to MS Duo card or vice versa. Also, the files can be copied to a different folder of the same memory card.

1. Files copied to a different memory card

In the File Browser, the left column is the source memory card and right column is the destination. Switch the storage in the left column in the File Browser by pressing storage. Highlight a file from the main menu, go to the Data Management menu and in copy press ↵.

2. Files copied to a different folder

Choose the same memory card by pressing storage. Highlight a file from the main menu, go to the Data Management menu and in copy press ↵.

DELETE

1. Highlight a file from the main menu, go to the Data Management menu and in delete press ↵.
2. You will be asked to confirm **YES** or **NO**. Press ↵ to confirm your selection.

Other applications:

Extend your video experience with recorder.

Through the MPEG-4's recorder applications, you can extend your video experience with PDA, Sony PSP, Video iPOD and Nintendo game console.

Below is the operation guide to lead you to follow the easy operation steps, then you can enjoy those video content generated from MPEG-4 recorder and play back on Sony PSP, Video iPOD and Game Boy Micro.

I.Sony PSP

1. While you go for the recording functionality, a different resolution quality can be chose among 320x240-30fps, 368x208 and 640x480. (See page 18). And both resolutions of 320x240-30fps and 368x208 quality can be played back on the Sony PSP.
2. Before you use the MS (Pro) Duo Card with MPEG-4 recorder, better you can format the MS (Pro) Duo Card by Sony PSP first. This is to make sure Sony PSP can recognize the recorded files generated from MPEG-4 recorder.
3. Afterwards you can record the content into the MS (Pro) Duo Card, remove the MS (Pro) Duo card while complete the recording, and then insert the MS (Pro) Duo Card into the Sony PSP for further playback.

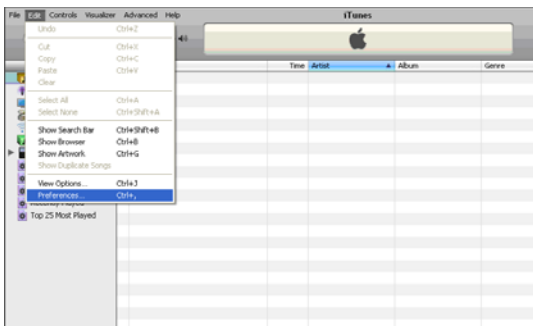
II.Video i-POD

Basically the Video iPod only supports the MPEG4 video up to 480x480 resolutions.

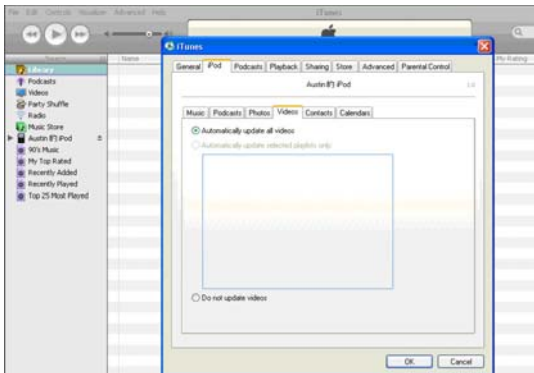
Thus we suggest you to choose the video content encoded in 320x240-30fps or 368x208 resolution from MPEG-4 recorder for playback on Video iPod. Or the Video iPod will skip those video files which are not supported by Video iPod.

Operation Procedure:

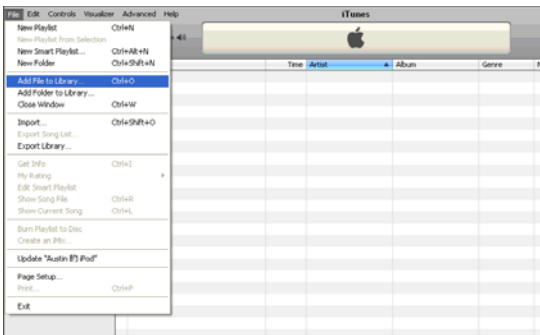
- 1.Assume you already install the "iTunes" driver into your PC.
- 2.Connect your Video iPod to PC, and then open the "iTunes" Utility.
- 3.Click on the menu of "Edit", and then select "Preferences".



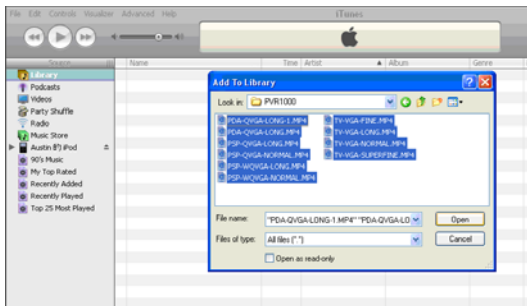
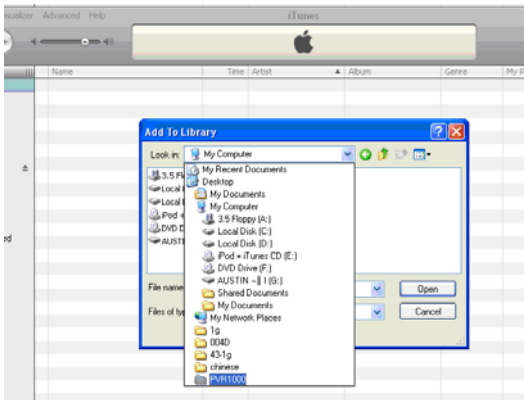
4. While below window pops up, please click "Video" item, "mark" the selection of "Automatically update all videos", then confirm "OK".



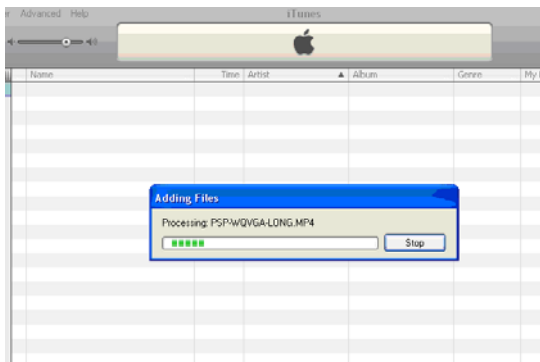
5. Click the "File" segment, execute the item of "Add File to Library".



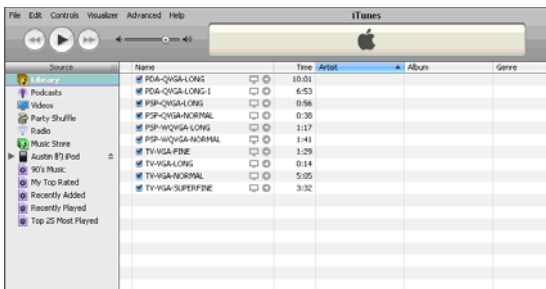
6. Afterwards, chose those MPEG-4 video files which you want to load into the Video iPod.



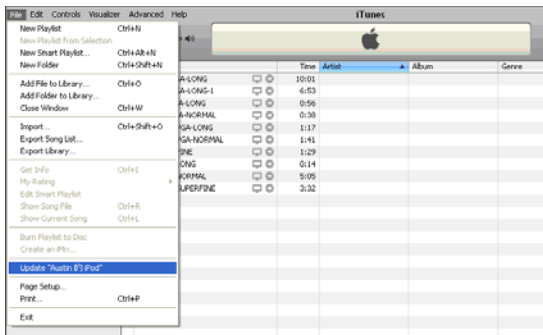
7. The iTunes utility will start to "Adding Files" into the Video iPod.



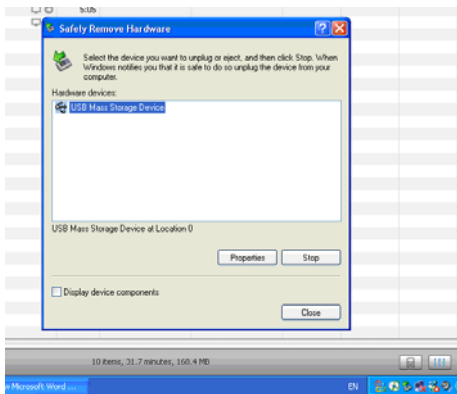
8. Now you can find all the video files chose by you listed in the file category of iTunes.

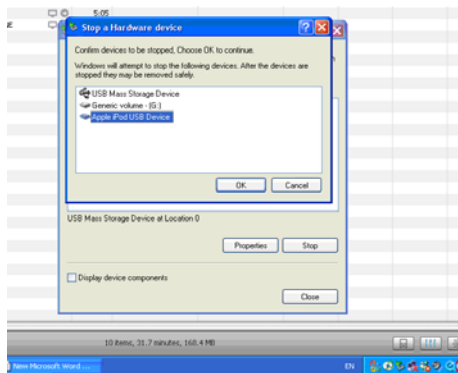


9. Click the "File" item again, and then execute this function of "Update XXX's iPod".

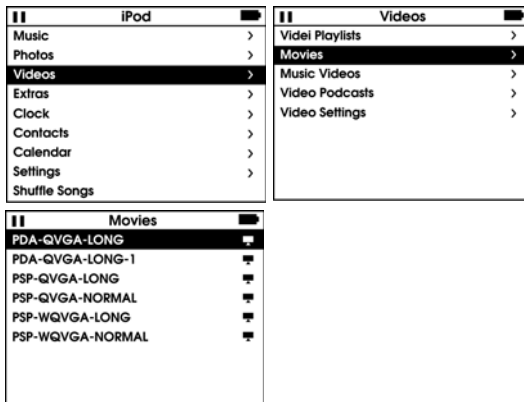


10. Safely disconnect the Video iPod from your PC by following below steps.

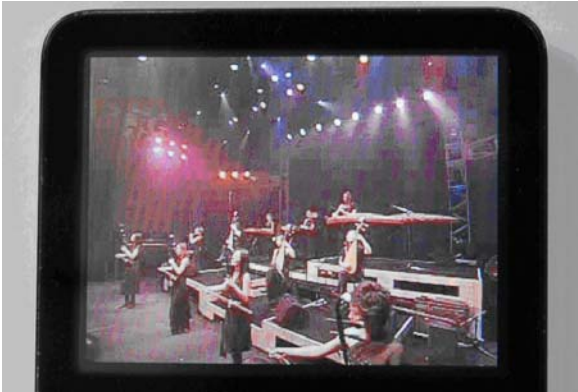




11. Then enter the Videos mode of iPod to play back those MPEG-4 content.



12. Now you can enjoy the Video programs anywhere, anytime.



III. Nintendo Game Boy Micro

The Nintendo Game Boy Micro can play back the recorded file from MPEG-4 recorder and support up to 640x 480 MPEG4 format, no problem.

Before running this interesting application, the extra adapter for Game Boy Micro is needed (See below photo for reference). To plug the Yan Micro Media Adapter into the Game Boy Micro, thus you could get Game Boy Micro to read the content stored in the SD card. Though the MPEG-4 recorder doesn't support the SD card now, the file data can be easily transferred from CF/MS cards to SD card through card reader connected to your PC.



- 1) Play- Yan Micro Media Adapter
- 2) Nintendo Game Boy Micro

IV.Mobile phone

1.First ,please check the specifications of your mobile phone:

- Make sure your mobile phone can play the .MP4 video format (MPEG4 video stream with AAC audio) or not .If yes ,you can use this recorder to make some videos.

- Check the memory card which the mobile phone supports.

2.Insert the memory to the slot of recorder.

3.Setup the recording format , users is recommended to record the video with the format any quality of 176x120.

4.Remove the memory card from recorder and insert it to the mobile phone.

5.Launch the movie player of your mobile phone.

6.Play the videos from your memory card ,the playback quality depends on the computing power of your mobile phone.

V.PDA Smartphone

1.The recorder can support the following operating system.

- Windows mobile 2003 Pocket PC edition & second edition & phone edition

- Windows mobile 5.0 Pocket PC edition & phone edition

- Pocket PC 4.2

- Palm O.S. 5.2.8

2. Before recording, please check the specifications of your smart phone or PDA:

- Most Windows equipped smart phone or PDA can not play the .MP4 files (because no built-in AAC codec), the PDA and smart phone user are recommended to use the video player named TCPMP. Free download the video player "TCPMP" via the internet.

- Please download the TCPMP player and AAC plug-in and install them to your PDA or smart phone. The file "TCPMP.PALMOS.0.71.ZIP" + "TCPMP-AAC-PLUGIN.PALMOS.0.66.ZIP" are suitable for PALM users. The file "TCPMP.SETUP.0.71.EXE" + "TCPMP-AAC-PLUGIN-WINDOWS-MOBILE.0.66.ZIP" are suitable for Windows mobile and Pocket PC users.

- Check the memory card which the mobile phone supports.

3. Insert the memory card to the slot of recorder.

4. Setup the recording format, users is recommended to record the video with the format any quality of 320x240-15fps.

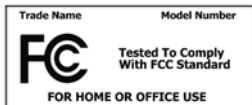
5. Remove the memory card from recorder and insert it to the PDA or smart phone.

6. Launch the TCPMP on your PDA or smart phone.

7. Play the videos from your memory card, the playback quality depends on the computing power of your PDA or smart phone.

4. Appendix

FCC Certification



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These lim-

its are designed to provide reasonable protection against harmful interference in a residential installation. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.

CE Notice (European Union)

Marking by the symbol indicates compliance of this recorder to the EMC Directive of the European Union. Such marking indicates that this recorder meets the following technical standards:

EN 55013:2002+A1:2003-"Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment".

EN 55020-"Electromagnetic immunity of broadcast receivers and associated equipment".

EN 61000-3-3-"Electromagnetic compatibility (EMC) - Part3: Limits - Section3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16 A."

EN 60950-"Safety of Information Technology Equipment."

EN 60950-1:2001- "Safety of Information Technology Equipment."

IEC 60950-1:2001-"Safety of Information Technology Equipment."

C-tick (Australian Regulation)

This recorder is compliance with the Australian regulation (AS/ NZS CISPR13 : 2003 Class B).

VCCI (Japanese Regulation)

This recorder is compliance with Japanese regulation (V-2/04.04 & V-3/05.04).

To determine which classification applies to your recorder, examine the FCC registration label located on the back panel of the recorder.

Troubleshooting

Symptom	Possible cause	Possible remedy
No video display.	Unit has no power.	Ensure that unit is plugged in correctly. You should see a green LED on the front panel if it is plugged in correctly. Refer to “Connecting power” on page 11.
	Cable connecting AV Out to video monitor is not properly connected.	Refer to “Connecting to a TV (viewing only)” on page 10 for information.
Remote control not functioning.	Obstruction in front of infrared sensor on recorder.	Ensure that a line of sight exists between the remote control and the sensor on the recorder.
	Low battery power.	Replace battery in the remote control.
CF card or MS Duo not recognized by the recorder	Card not inserted properly.	Refer to “Connecting power” on page 11 and “Connecting power” on page 11 for information about proper handling of CF and MS Duo memory cards. Never force memory cards into the recorder.

Please visit the website to get the latest information about the recorder.

Specifications

Video encoder	Application	Format
	1) PSP	1) *QVGA (320x240); MPEG4+AAC-LC, 30fps *368 x 208 (16:9); MPEG4+AAC-LC, 30 fps
	2) TV	2) (640x480); MPEG4+AAC-LC, 30fps
	3) iPod	3) (320x240); MPEG4+AAC-LC, 30fps
	4) PDA/ Smartphone	4) (320x240); MPEG4+AAC-LC, 30fps (320x240); MPEG4, 15fps
	5) Mobile Phone	5) *RS, MMC, T-Flash, Min SD, Micro SD, MMC mobile *176x120;MPEG4+AAC-LC, 15fps *320x240-3GP;MPEG4+AMR, 15fps *176x144-3GP;MPEG4+AMR, 15fps
Video decoder	1) MPEG-4 SP, MPEG-1 Layer 3 (MP3), 30 fps at D1 resolution 2) DivX 3.11 @ CIF resolution; 4.x; 5.x; 30 fps at D1 resolution 3) Quick time 6; MPEG-4 AAC-LC stereo, MP4 format at D1 resolution 4) 3GP (MPEG4+AMR)15fps at 320x240 or 176x144 Resolution	
File formats	ASF, AVI, MP4, 3GP	
Audio decoder	Codec	G.726 AMR
	MP3 decoding @ 30-320 kb/s CBR & VBR	
	WMA	
Still image	Codec	JPEG decode (Baseline), BMP, GIF (animated not included)
Resolution	Up to 16M pixels (4096 x 4096)	
Thumbnails	Supported when the photo has the EXIF header	
Image Processing	Zoom in, Zoom out 1x/2x/4x	
Storage	Memory card	CF card, MS Duo card, MS Pro Duo(with adapter) card SD series, MMC, MS card

TV system	Video Out Format	NTSC/PAL		
Power source	External 5V AC/DC adaptor (100 ~ 240V, 1.5A)			
Dimensions and weight	118 x 87 x 18 mm, 140g			
Typical Recording Times on a 1GB Card				
Resolution/ Quality	Economic	Normal	Fine	Super fine
640x480	330min (384kbps)	168min (768kbps)	127min (1024kbps)	65min (2000kbps)
Save Folder:	TV	TV	TV	TV
320x240- 30fps	330min (384kbps)	168min (768kbps)	105min (1240kbps)	85min (1535kbps)
Save Folder:	PSP defined	PSP defined	PDA-iPod	PDA-iPod
368x208	330min (384kbps)	168min (768kbps)	N/A	N/A
Save Folder:	PSP defined	PSP defined		
320x240- 15fps	590min (192kbps)	459min (256kbps)	318min (384kbps)	165min (768kbps)
Save Folder:	PDA- Smartphone	PDA- Smartphone	PDA- Smartphone	PDA- Smartphone
176x120	827min (128kbps)	590min (192kbps)	459min (256kbps)	318min (384kbps)
Save Folder:	Mobile	Mobile	Mobile	Mobile
320x240-3GP	661min (192kbps)	501min (256kbps)	337min (384kbps)	170min (768kbps)
Save Folder:	Mobile	Mobile	Mobile	Mobile

176x120-3GP	973min (128kbps)	661min (192kbps)	501min (256kbps)	337min (384kbps)
Save Folder:	Mobile	Mobile	Mobile	Mobile

Firmware Upgrade Instructions

(1) Unpacking the box

When unpacking the recorder ensure the following items present.

- **one recorder**
- **one remote controller**
- **one power adapter**
- **two AV cables**

(2) Connecting the recorder to TV

- **Connect the power adapter to the recorder and plug the adapter to an outlet.**
- **Connect the AV cable to the AV OUT socket on the recorder.**
- **Connect the corresponding video and audio connector of the AV cable to the video and audio input on the TV.**
- **Turn on the TV and switch to AV mode.**

(3) Turning on the recorder

- **Unpacking the remote controller and remove the slip inserted inside the controller.**
- **Press “Power” on the remote controller.**
- **The main page presents as the figure 1.**



Figure 1 Main Page

Note: Depending on your region, you may need to change TV output from NTSC to PAL at this point. This is done by accessing the settings menu (figure 2 below) and changing the TV Output mode.

(4) Upgrade the firmware

- **Unzip and Save new firmware file to CF/Memory stick card via a CF/Memory stick card reader. The vcr4800.bin file should be saved directly to directory and not in any folder.**
- **Insert CF/Memory Stick card into the MPEG-4 recorder.**
- **Scroll to the Setup mode by pressing right arrows on the remote controller. Setup mode shows as the figure 2.**



Figure 2 Setup Menu

- **Press “Enter” on the remote controller entering the Setup menu.**
- **Scroll through the Setup menu to the second page. The current firmware version like v.1.03.44 will show underneath the Factory Reset.**
- **Use the up arrow to scroll to the Firmware Upgrade.**
- **When the Firmware Upgrade is highlighted, press “Enter” on the remote controller to start the firmware upgrade.**
- **A “Clock” icon will pop up and remains for seconds.**

- **When the “Clock” icon is gone, the recorder will turn off automatically.**
- **Press “Power” on the remote controller to turn on the recorder.**
- **Check out the firmware version and it should differ from the previous.**
- **Use the arrow to scroll to the Factory Reset.**
- **When the Factory Reset is highlighted, press “Enter” on the remote controller to do the system reset.**
- **Then, the firmware upgrade is done.**

